BUREAU OF ENVIRONMENT
CONFERENCE REPORT

SUBJECT: NHDOT Monthly Natural Resource Agency Coordination Meeting
DATE OF CONFERENCE: May 16, 2018
LOCATION OF CONFERENCE: John O. Morton Building
ATTENDED BY:

NHDOT
Sarah Large
Ron Crickard
Mark Hemmerlein
Tom Jamison
Hans Weber
Josh Lafond
Rebecca Martin
Stephanie Micucci
Tobey Reynolds

ACOE
Mike Hicks

US Coast Guard – Bridges
Jim Rousseau

NHDES
Gino Infascelli
Lori Sommer

NHF&G
Carol Henderson

NH Natural Heritage Bureau
Amy Lamb

Consultants/Public Participants
Darren Benoit
Jenn Riordon

(When viewing these minutes online, click on an attendee to send an e-mail)

PRESENTATIONS/ PROJECTS REVIEWED THIS MONTH: *(minutes on subsequent pages)*

(When viewing these minutes online, click on a project to zoom to the minutes for that project)

NOTES ON CONFERENCE:

April 18, 2018 Natural Resource Agency Meeting Minutes.
Sarah Large stated that the April 18, 2018 meeting minutes were only distributed for comment one week prior and that the finalization of the April meetings minutes would be postponed until June.

Brookline, #41364 (X-A004(607))
Darren Benoit, DuBois & King, gave an introduction to the project including the project locations and scope of work. There are two segments of sidewalk proposed, each with its own pedestrian bridge over the Nissitissit River; Segment 1 is a pedestrian bridge over the Nissitissit River with about 300 feet of connecting sidewalk along Mason Road between Potanipo Hill Road and the public boat access; Segment 2 is 2,300 linear feet of sidewalk along South Main Street between NH 130 and the rail trail crossing including a bridge over the Nissitissit River. Anticipated construction is 2019/2020.

The project is about to conclude the Engineering Study. Alternatives include a path/bridge on either side of each road mostly within the existing ROW. Need for the project included an overall plan for Brookline's alternative transportation plan showing the importance of the South Main Street link and a picture depicting residents crossing the narrow (21-foot wide) highway bridge to get to the town beach and boat access.

Mason Road concerns included wetland impacts, water quality for Potanipo Pond, but not for Nissitissit, threatened and endangered species (NHB18-0271), potential 4(f)/6(f) issues, shoreland, and floodplains. The preferred alternative is the south side of Mason Road.

South Main Street concerns were focused on the Nissitissit River crossing. Concerns included shoreland, wetlands, and floodplain. There were no concerns for threatened and endangered species (NHB18-0270).

Comments received:
Carol Henderson was interested in knowing what the NHB number for the Nissitissit River's search was. Darren provided NHB18-0270 and that there were no hits for any species. Mike Hicks asked about developing an MOA for the State Historic Preservation Officer. Ron Crickard added that an effects determination has not been made at this time and that this would be information that should come at a later date. Sarah Large asked if the project was going to attend a cultural resource agency meeting. Darren indicated that the project would. Mike also suggested that the coordination on the Northern Long-eared bat would be needed. Ron added that Federal Highway will be the lead on this project. Carol asked if there would be any impacts to the stream bottom. Darren answered that stream bottom impacts are not anticipated. Carol asked how far into the design were you and if you plan to come back again to another natural resource agency meeting. The plan is to come back with more refined project impacts and impact areas.

This project has not been previously discussed at a Monthly Natural Resource Agency Coordination Meeting.

Epsom-Chichester-Pittsfield-Barnstead, #41613 (X-A004(701))

Hans Weber (NHDOT) provided an overview of the project, which involves pavement rehabilitation on an approximate 13.5-mile segment of NH Route 28 from the traffic circle in Epsom northerly to approximately 900 feet north of Hillsgrove Road in Barnstead.

The proposed work will include spot travel way inlays and a full width, full length 1.5-inch overlay. Some guardrail replacement and drainage work may also be included and is currently being evaluated. In addition, an existing 24" culvert located east of the NH Route 28/NH Route 107 intersection in Pittsfield is proposed to be slip lined.

Jenn Riordan (The Smart Associates) discussed the natural resources within the project area. NH Route 28 follows the Suncook River. The only anticipated wetland impacts are at the culvert slip lining location and would include approximately 250 square feet of permanent impact from the placement of stone at the culvert outlet. The stone is necessary to provide erosion protection from the increased velocity as a result of lining and narrowing the pipe. There would also be approximately 900 square feet of temporary impact at the culvert inlet and outlet as a result of the staging area associated with the slip lining operation. In addition, since the roadway embankment is very steep, a temporary access road will be constructed along the toe of slope so construction vehicles can access the culvert outlet. This road will involve an estimated 2,000 to 3,000 square feet of temporary wetland impact.

An intermittent stream is present at the outlet of the culvert and the placement of stone will result in approximately 30 linear feet of impact.

The Suncook River is subject to the Shoreland Water Quality Protection Act. The culvert slip lining area is located more than 250 feet from the Suncook River. No excavation is proposed for the pavement rehabilitation. The only potential impacts would be from excavation associated with guardrail replacement. The exact locations for guardrail work are still being determined. Sarah Large recommended following up with Matt Urban once the locations are identified to discuss if a permit is required. If excavation within the protected shoreland is proposed, a permit will be required.

Jenn mentioned that the Natural Heritage information request had just recently been submitted. Amy said that she quickly reviewed the results and there are several species within 1 mile of the project corridor, including several turtle species. Carol Henderson had discussed the project with Kim Tuttle and Kim recommended using a liner with a rough bottom so that wildlife could still pass through. It was discussed that the culvert is relatively long and steep (117 feet long with an invert difference of approximately 25 to 30 feet) so wildlife use may be limited.

Amy mentioned that there is a rare plant species near Brindle Pond in Barnstead but it did not appear that the project would have any impacts. Jenn said that they could confirm this once the locations of any guardrail or drainage work have been identified.

Federally-listed species include northern long-eared bat and small whorled pogonia. One tree will be cut at the culvert slip line area since it is growing adjacent to the culvert and needs to be removed for construction. No other tree clearing is proposed. For small whorled pogoina, the only potential area for impacts would be at the culvert slip line location. Smart Associates is planning to do a field survey of this area.

The Suncook River is identified as Essential Fish Habitat for Atlantic salmon. No direct impacts are anticipated. Erosion and sediment controls will be used to minimize impacts during construction. The Suncook River is located approximately 300 feet downstream of the culvert slip line work area.

No water quality impacts are anticipated beyond potential temporary impacts during construction. No increase in impervious surface is proposed.

Portions of NH Route 28 are mapped as 100-year floodplain and the floodway for the Suncook River is adjacent to the project corridor in several areas. The culvert slip line area is located at the edge of a Zone AE floodplain. The only impact anticipated would be the small amount of stone placed at the culvert outlet.

Gino asked how large the drainage area is for the culvert to be slip lined. Hans said that he thought it is less than 200 acres. Lori said that she did not see the need for wetland mitigation at this point. [Jenn later looked at the USGS Stream Stats website and the culvert does not show up on the USGS stream layer. The two adjacent streams have watersheds of 38 and 64 acres. Hans confirmed later that the drainage area for the 24" culvert is less than 200 acres.]

Carol mentioned potential brook floater impacts at the slip line location. Jenn said that the stream there is very small (1 to 2 feet wide) and appears to be intermittent, so it is unlikely that brook floater would be present.

This project has not been previously discussed at a Monthly Natural Resource Agency Coordination Meeting.

Bethlehem, #26763 (X-A004(296))

The proposed project will address a culvert under Main Street (US Route 302) between Maple Street (NH Route 142) and Congress Road in Bethlehem. The project had been reviewed previously and the Design team returned last month to update the agencies on a modification to the design. The stream through the structure is a tributary to Barrett Brook. Josh Lafond explained that there is a lot of impervious surface in the project area. NH Route 302 through this area has 12 foot lanes and 4 foot shoulders. Near the culvert the paved shoulders are wider, approximately 10 feet wide. He described that the culvert goes under a local business parking lot.

J. Lafond explained that the culvert is made up of several different materials. J. Lafond explained that the original culvert is stone masonry (from the early 1900s), the inlet addition is concrete, and the outlet addition is a steel arch pipe. J. Lafond described that the outlet is near the Bethlehem Visitor Center and Heritage Society building and the outlet is near the Maya Papaya and White Mountain Transmission shops.

J. Lafond described the poor condition of the structure including the currently perched condition of the outlet. The current project design proposes to eliminate the perch. There have been multiple failures (sink holes) over the last few years. J. Lafond showed photos of the winter collapse of a catch basin, a sink hole, and the failing upstream concrete retaining walls at the culvert inlet. The inlet concrete retaining walls are proposed to be replaced in kind (same height and length) and are being designed by the Bride Design Bureau. J. Lafond showed the slope lines outside of the concrete walls and the conceptual profiles that have been developed. The height of the replacement walls will be 4.5 feet to 5 feet. The slopes will be fairly shallow. If the walls were to be removed, the slopes would need to be cut back a significant distance, which would impact surrounding properties. The area will be disturbed during construction, but once construction is complete, the area will be graded to mimic existing slopes. The Design team is avoiding impacts to the brick memorial pavers. The contract will include an exploratory item. The design team does not believe the sewer line will be impacted.

J. Lafond showed sketches of the potential design of the retaining walls including replacing the streambed with simulated stream bed materials. He explained that the Design team is hoping to have separate walls and footings. Bridge Design will supply the requirements for the walls' toes and heals. If the toes would come to within 2 feet of each other (the channel is 5 feet wide) the design will most likely connect the two

walls (3 sided box), which would be more stable. If the walls were connected, the heals could be smaller. In either scenario, simulated streambed materials are intended.

J. Lafond showed pictures from inside the culvert. The DOT District had informed the design team that this culvert requires a lot of maintenance. At the outlet, the pipe is steel and has corroded and separated. In April of 2018 another sink hole developed over a trunk line, which DOT District forces repaired. J. Lafond explained that the trunk lines are old and are made of clay. The project proposes to include repairs of the trunk lines where they attach to the culvert.
The Design team is planning to return to explain the scope and design changes to the Town of Bethlehem.

The group discussed that the slip line will be structurally sound, meaning it will be able to hold the weight of the road above, without depending on the existing structure. J. Lafond explained that the entire length of the culvert will be slip lined and some type of grout will be used between the existing structure and the slip line.

J. Lafond also commented that the new design will be primarily constructed from the culvert inlet with some minor digging for the trunk lines. J. Lafond showed graphics of the proposed slipline. The slipline proposed if a tunnel liner corrugated pipe that comes in sections. Most of the slipline would be an underpass shape. The first 30 feet from the inlet is smaller and so this section might be elliptical High-density polyethylene pipe to provide the most hydraulic area. This would be attached to the underpass shaped pipe. The overall velocities will be similar to the existing.

S. Large commented that strong swimmers (adult salmoniods) will be able to use the pipe after construction since the perch will be removed. The corrugation helps control the velocity. To eliminate the perch without excavating, the design proposes to back up the area with stone (simulated stream material). The Project manager decided not to create a pool due to potential liability issues. The stone/simulated streambed fill area to eliminate the perch will be 25 feet long with a 4% slope, which matched the pipe slope. J. Lafond showed a cross section at the outlet of the pipe. There will need to be more material added closer to the pipe and less material further form the pipe. The pipe outlet will be flush with the simulated streambed material.

The group discussed how far the simulated streambed would extend up the banks of the stream. J Lafond explained it is a Tier 2. L. Sommer indicated mitigation will be required for the 25 foot length for both banks and the channel of the stream. G. Infascelli explained that by approving the permit, the Wetlands Bureau is confirming that the design will improve the existing crossing, even though it will not comply with the stream crossing rules. L. Sommer agreed that since the channel through the pipe is already impacted, no mitigation is needed for the stream through the pipe. Also, since the retaining walls are being replaced in kind, mitigation will not be required at the inlet. J. Lafond explained that there will be some temporary impacts to impound water. The group discussed the need to mix fines in with the simulated streambed material so that the stream does not disappear below the bottom of the channel. The sizing of the material will need to be a balance. G. Infascelli explained that there should be monitoring and a plan for repairs included in the application. T. Reynolds suggested stockpiling the removed material and putting back as much as possible. G. Infascelli suggested putting it back in the sameo rder it is removed. L. Sommer indicated that the wetland plans should clearly specify that the design will replace the stream characteristics.

The group discussed that the contamination appears to be concentrated on the outlet side of the pipe. There are not concerns about replacing the retaining walls on the inlet side. Construction is planned for summer of 2019.

This project has been previously discussed at the 5/20/2015, 11/16/2016, 3/21/2018 Monthly Natural Resource Agency Coordination Meetings.